MAZAYEV, A.V., doktor tekhn. nauk dots.; KUZNETSOV, A.N., kand. tekhn. nauk dots.; KOLUPAYEV, A.P.

State of and outlook for the development of geodetic astronomy. Trudy MIIGAIK no.31:41-48 '59. (MIRA 13:3)
(Astronomy, Spherical and practical)

KUZNETSOV, A.N., dotsent, kand.tekhn.nauk

F.N. Krasovskii's work in the field of practical astronomy.
Trudy MIIGAIK no.37:55-61 '59. (MIRA 15:5)
(Krasovskii, Feodosii Nikolaevich, 1878-1948)
(Astronomy, Spherical and practical)

23715

S/035/61/000/004/052/058
A001/A101

3,1200

AUTHOR: Kuznetsov, A.N.

TITLE: On the scientific research activity of the Astronomy Department of the Moscow Institute of Engineers for Geodesy, Aerial Photosurvey and Cartography

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 4, 1961, 4, abstract 4G21 ("Tr. 14-y Astrometr. konferentsii SSSR , 1958", Moscow-Leningrad, AN SSSR, 1960, 90-92, Engl. summary)

TEXT: The scientific research activity of the Astronomy Department includes the construction of new geodetic instruments and improvement of existing ones, as well as investigation of methods of astronomical determinations employed in geodesy. A photoelectric accessory to the astronomical universal instrument AY (AU) 2"/10" for determining time by Zinger's method and latitude by Pevtsov's method is being constructed; a device for micrometric rotation of the AU 2"/10" telescope along azimuth and altitude has been manufactured. Working drawings of an original zenith telescope model, based on the principle of restrained floating, have been

Card 1/2

23715

On the scientific research activity ... S/035/61/000/004/052/058
A001/A101

compiled. Devices are designed for testing pivot journals and lateral bending. A comparison of Zinger's method and the method of time determination from observations of stars in meridian has shown the advantage of the former. The Dellen method is recommended for determinations of longitude differences. A comparison of methods of Talcott and Pevtsov has shown that Pevtsov's method is not inferior in accuracy to Talcott's method.

G. Panova

[Abstracter's note: Complete translation]

Card 2/2

KUZNETSOV, A.N.

Work of scientific student circles in the academic year 1958/59.
Trudy MIIGAIK no.41:97-98 '60. (MIRA 13:11)
(Surveying) (Cartography)

KUZNETSOV, A.N., dotsent, kand.tekhn.nauk

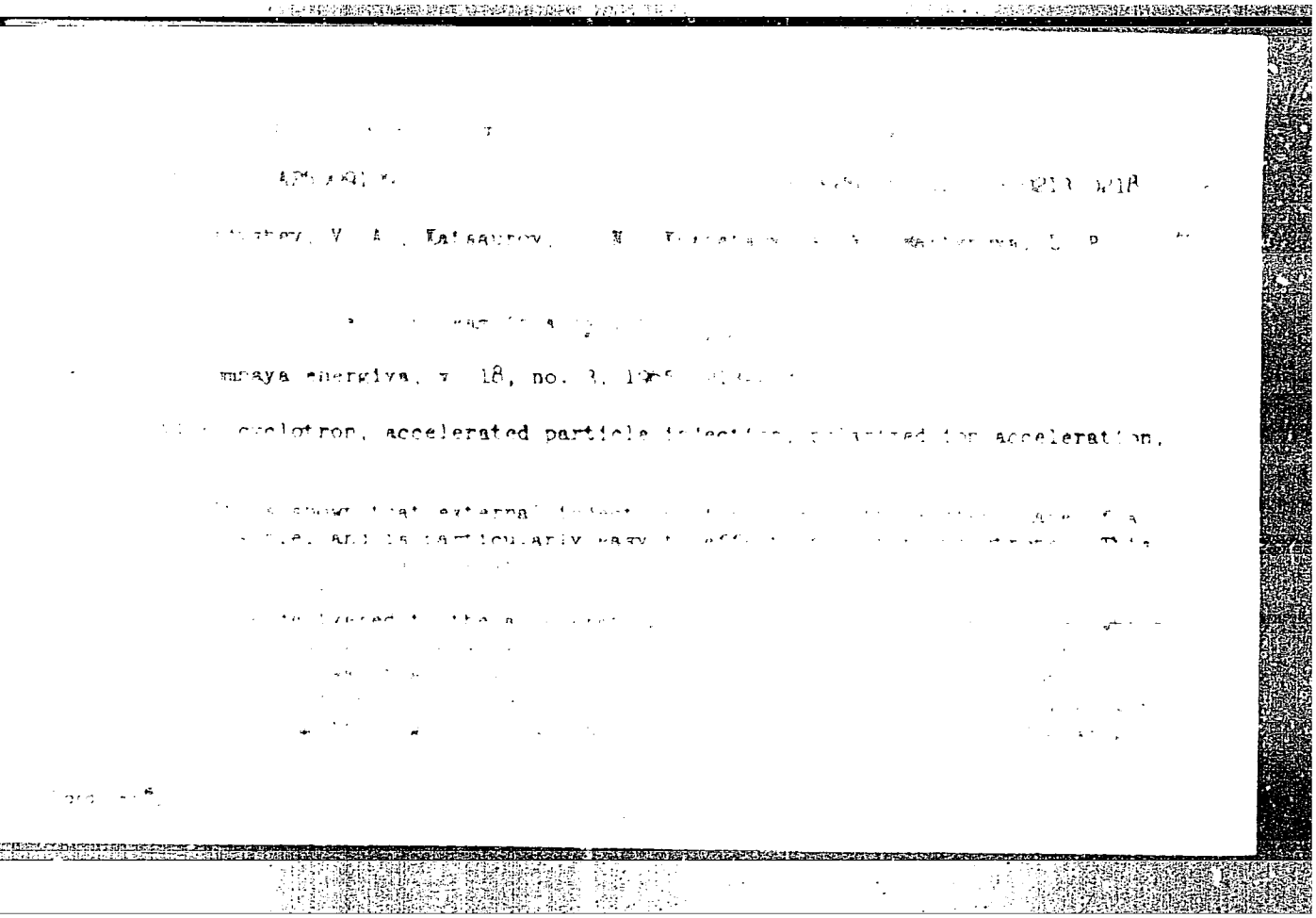
Using the AU2"/10" universal astronomical instrument with photoelectric recording of star transits in longitude determination. Trudy MIIGAIK no.48:149-154 '61. (MIRA 15:8)

1. Kafedra astronomii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Longitude) (Astronomical instruments)

KUZNETSOV, A.N.

Using a mobile map of the stellar sky during the study of astronomy in secondary schools. Uch.zap.Pens.gos.ped.inst. no.7:98-107 '62. (MIRA 16:7)

(Astronomy--Audio-visual aids)



mnaya energiya, v 18, no. 3, 1[illegible]

cyclotron, accelerated particle [illegible], [illegible] for acceleration,

N NR: AP5009109

correct

ASSOCIATION: None

SUBMITTED: 19Mar64 ENCL: 02 SUB CODE: NP

NO REF SOV: 000 OTHER: 002

Card 2/4

ACC NR: AP7002571 SOURCE CODE: UR/0413/66/000/023/0062/0062

INVENTOR: Gedymin, Yu.Yu.; Krivonos, G.A.; Starikov, V.S.; Kuznetsov, A.N.; Epshteyn. G.G.

ORG: none

TITLE: Method of lubricating the surface of aluminum or its alloys for extrusion . Class 23, No. 189111. [Announced by All-Union Scientific Research Institute for the Planning and Design of Metallurgical Machinery (Vsesoyuznyy nauchno-issledovstel'skiy i proyektno-konstruktorskiy institut metallurgicheskogo mashinostroyeniya)].

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 62

TOPIC TAGS: metal extrusion, ~~aluminum extrusion, aluminum alloy extrusion, extrusion lubricant~~, metal surface, lubrication technique, extruded aluminum

ABSTRACT: This Author Certificate introduces a method of lubricating the surface of aluminum or its alloys as a preparation for extrusion with the use of a fat-base lubricant. To improve the quality of the lubricant, the surface of a billet is first coated with a layer of aliphatic acid salt containing 10—20 carbon atoms in a molecule, and then with a fatty substance such as mineral oil, animal or vegetable fat or their mixture.

SUB CODE: 13/ SUBM DATE: 16Dec64/ ATD PRESS: 5113

Card 1/1 UDC: 621.892.6

ACC NR: AP7000797 SOURCE CODE: UR/0089/66/021/0[illegible]/0390/0392

AUTHOR: Katsaurov, L. N.; Kuznetsov, A. N.

ORG: none

TITLE: Concerning the question of the drop of the neutron yield in tritium targets

SOURCE: Atomnaya energiya, v. 21, no. 5, 1966, 390-392

TOPIC TAGS: triton bombardment, neutron reaction, deuteron interaction, physical diffusion

ABSTRACT: The authors show that the observed drop in the yield of neutrons in the D T reaction reported in various investigations, can be only partially attributed to the energy loss in the carbon film produced by this reaction, but can be fully explained by means of the diffusion mechanism. In this mechanism the deuterium ions falling on the solid tritium target produce a concentration gradient which gives rise to diffusion of the hydrogen dissolved in the zirconium or titanium. When the amount of deuterium accumulated is sufficient to make the concentration of the particles near the surface of the target exceed the limiting concentration, equilibrium sets in, and hydrogen isotopes begin to be released from the target, the release of tritium and deuterium being proportional to their corresponding concentration. Consequently, the deuterium striking the target continuously depletes the tritium of the target. The differential equations of this process are presented and expressions are obtained for the tritium concentration, for the time of establishment of equilibrium, and for

Card 1/2 UDC: 539.172.13

ACC NR: AP7000797

the reaction tritium yield. The theoretical value obtained for this yield agrees well with experimental data. The authors thank I. Ya. Barit and I. M. Frank for numerous discussions of the results, and also A. V. Yeldipinskiy and V. P. Perelygin for help with the experiments. Orig. art. has: 3 figures and 7 formulas.

SUB CODE: 18, 20/ SUBM DATE: 24Aug65/ ORIG REF: 002/ OTH REF: 005

Card 2/2

L 41310-66 EWT(m)/EWP(k)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AT6024939 (N) SOURCE CODE: UR/2981/66/000/004/0264/0269

AUTHOR: Kuznetsov, A. N.; Epshteyn, G. G.; Kishnev, P. V.

ORG: none

TITLE: Cold extrusion of SAP alloy thin-wall tubes

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 264-269

TOPIC TAGS: aluminum alloy, dispersion ~~strengthened metal~~ hardening, high strength alloy, sintered aluminum powder, ~~alloy~~, metal extrusion/SAP aluminum alloy

ABSTRACT: Cold extrusion of tubes from hollow billets of SAP-1 alloy (8.5% aluminum oxide) is described. The billets were 35.5 mm in outside diameter and 30 to 100 mm long with a 13 mm bore. The billets were successfully extruded into tubes 14 mm in outside diameter with a wall thickness of 1 mm at an extrusion rate of 95.5%. The tubes can be extruded at a rate of 2—4 m /sec. Therefore, the extrusion can be done in high-speed hydraulic or mechanical presses. During the extrusion the temperature of billets increased up to 400—600C, which lowered the extrusion pressure. The microstructure of extruded tubes did not show any texture. Extruded tubes were successfully cold drawn to an outside diameter of 13 to 9 mm. Cold drawing increased the strength of the tubes from 32.6 kg/mm^2 for extruded tubes to 37.6 kg/mm^2 for tubes

Card 1/2

L 41310-66

ACC NR: AT6024939

0

9 mm in diameter. The corresponding figures for elongation were 4 and 1.1%. Orig. art. has: 4 figures and 2 tables. [TD]

CODE: 11, 13/ SUBM DATE: none/ ATD PRESS: 5158

Card 2/2 hs

L 27967-66 EWT(m) IJP(c)

ACC NR: AP6017683 SOURCE CODE: UR/0089/65/019/005/0442/0442

AUTHOR: Gladyshev, V. A.; Katsaurov, L. N.; Kuznetsov, A. N.; Moroz, Ye. M.; Nechayeva, L. P. 3/ B

ORG: none

TITLE: Construction of a 300 kev sector cyclotron 19 with external injection (Entire article)

SOURCE: Atomnaya energiya, v. 19, no. 5, 1965, 442

TOPIC TAGS: cyclotron, particle accelerator target, deuteron, diffusion pump, cyclotron magnet, vacuum chamber/N-5T diffusion pump 10

ABSTRACT: With thin targets, accelerated particles can be used more effectively if additional acceleration is applied to them after they have pased through the target (. L. N. Katsaurov and V. G. Latysh, Trudy FIAN SSSR /Proceedings of the Physics Institute, Academy of Sciences USSR/, Vol 33, p 235 (1965)). A small ~300 kev deuteron sector cyclotron was constructed at the Physics Institute to test the feasibility of applying additional acceleration. Plans have been made to carry out a number of investigations with this cyclotron especially since it is equipped to inject ions into the median plane (V. A. Gladyshev, et al., Trudy Mezhdunarodnoy Konferentsii po Uskoritelyam /Proceedings of the International Conference on Accelerators, Dubna, 1963/, Moscow, Atmoizdat, 1964, p. 658. The cyclotron magnet assembly consists of three individual C-shaped

Card 1/3 UDC: 621.384.611

magnets. This design provides for a very deep azimuthal variation of the magnetic field without requiring additional windings between the sectors and permits easy access to the chamber. The diameter of the magnet is 70 cm. The pole pieces are sectors with straight edges and 66 deg. angles. The supply current to the magnets is stabilized to 3×10^{-6}. Furthermore, the field of each magnet is stabilized by an independent proton stabilization circuit.

The pole pieces of the magnet serve partly as the covering of the vacuum chamber, and the chamber itself consists of several parts. Its main part has three triangular chambers made of brass, each bolted to the sides of the secotr pole pieces of two adjacent magnets. Vacuum sealing is provided by lead wire which is laid on the joints between the various parts and is squeezed tight by special fittings. An N-5T type oil diffusion pump provides a vacuum of $\sim 2 \times 10^{-6}$ mm Hg during operation with a beam.

Movable probes are available for observation of the beam. These probes can be positioned in any point of the vacuum chamber at the desired angle to the beam by virtue of a teflon sealed ball joint and a movable cross-bar that has Wilson-type teflon seals.

The source, together with the accelerator tube, can be moved in the median plane of the magnet, making it possible to vary the beam injection point within the chamber.

L 27907-66

ACC NR: AP6017683

0

The accelerating voltage is produced on the dees by a generator that feeds energy to a quarter-wave spiral line made of copper pipe wound on a glass cylinder. Up to 20 kv are used on the dees for acceleration.

In addition to the structural design features (split magnet, diassemblable vacuum chamber, spiral quarter-wave line), the cyclotron is equipped for external ion injection, which promises new ways of using polarized particle sources as well as other complex sources. [JPRS]

SUB CODE: 20, 13 / SUBM DATE: 09Feb65 / ORIG REF: 002

Card 3/3 CC

L 27968-66 EWT(m) IJP(c)

ACC NR: AP6017684 SOURCE CODE: UR/0089/65/019/005/0443/0443

AUTHOR: Gladyshev, V. A.; Katsaurov, L. N.; Kuznetsov, A. N.; Moroz, Ye. M.; Nechayeva, L. P. 54 B

ORG: none

TITLE: Magnetic field of a 300 kev sector cyclotron 19 with external injection (entire article)

SOURCE: Atomnaya energiya, v. 19, no. 5, 1965, 443

TOPIC TAGS: cyclotron, cyclotron magnet, deuteron, galvanometer, betatron, nuclear resonance, magnetic field, motion equation, computer calculation

ABSTRACT: This paper presents data on the magnetic field of a sector cyclotron with a split magnet designed to accelerate deuterons to 300 kev. The sectors of the cyclotron are displaced radially from the center of the magnet, and the cylindrical core is mounted in the center. The required field is obtained by empirical selection of magnet parameters.

Field measurements were made with the aid of a winding which is connected to a ballistic galvanometer and can be shifted step-wise. The winding, passing through the control points in the sectors, was shifted by 2 deg in azimuth and 1 cm radially. The field was measured in the control points by the nuclear resonance method.

The field focussing properties of an isochronic cyclotron depends on the depth of azimuthal variation and is determined by the betatron oscillation

Card 1/3 UDC: 621.384.611

2

frequencies. The depth of the azimuthal variation is characterized by "flutter", which is defined as $F = (\langle B^2 \rangle - \langle B \rangle^2)/\langle B \rangle^2$.

When the radius in the given cyclotron is increased from 10 to 30 cm, flutter increases smoothly from 0.2 to 0.45. The amplitudes of the first and second harmonics of the field, characterizing the asymmetry of the magnetic field, are approximately one order smaller than the amplitudes that cause radial instability.

The equations of motion were integrated on a computer, with the measured filed of the cyclotron given in the form of tables. This provided complete data on the behavior of particles and orbital parameters in a real field.

During the work, equilibrium orbits were constructed for various energies, and the mean magnetic field along the equilibrium orbits was calculated. There is an insignificant difference between the field obtained and an isochronic field, and the phase shift during acceleration from 40 to 300 kev is 6 deg as the energy increases by 10 kev per revolution. The orbital properties are especially evident on the so-called phase ellipses, which close after N revolutions; N is related to the betatron frequencies Q_r and Q_z by the relations

$$N_r = (Q_r - 1)^{-1} \text{ and } N_z = (Q_z - 1)^{-1}$$

By constructing ellipses for various energies and for different betatron amplitudes it was possible to establish that the maximum permissible amplitude of radial oscillations, which is 3 cm for 50 kev, increases with increasing energy to 5-6 cm for energies above 100 kev. The betatron

L 27968-66

ACC NR: AP6017684

frequencies calculated on the computer from the phase ellipses indicate that focussing is adequate over the entire range of energies.

Machine computed betatron frequencies were compared with frequencies calculated for assumed circular obits. This comparison revealed that frequencies calculated by "smooth approximation" formulas, by formulas using harmonic field analysis, and formulas derived for an assumed stepwise field, differ from the computer results by 5 to 7%.

Analysis of the magnetic field indicates that the cyclotron design with split magnets easily produces an isochronic field with very deep azimuthal variation, providing good focussing for all orbits.

Orig. art. has: 1 formula. [JPRS]

SUB CODE: 20 / SUBM DATE: 29May65

Card 3/3 CV

GLADYSHEV, V.A.; KATSAUROV, L.N.; KUZNETSOV, A.N.; MOROZ, Ye.M.; NECHAYEVA, L.P.

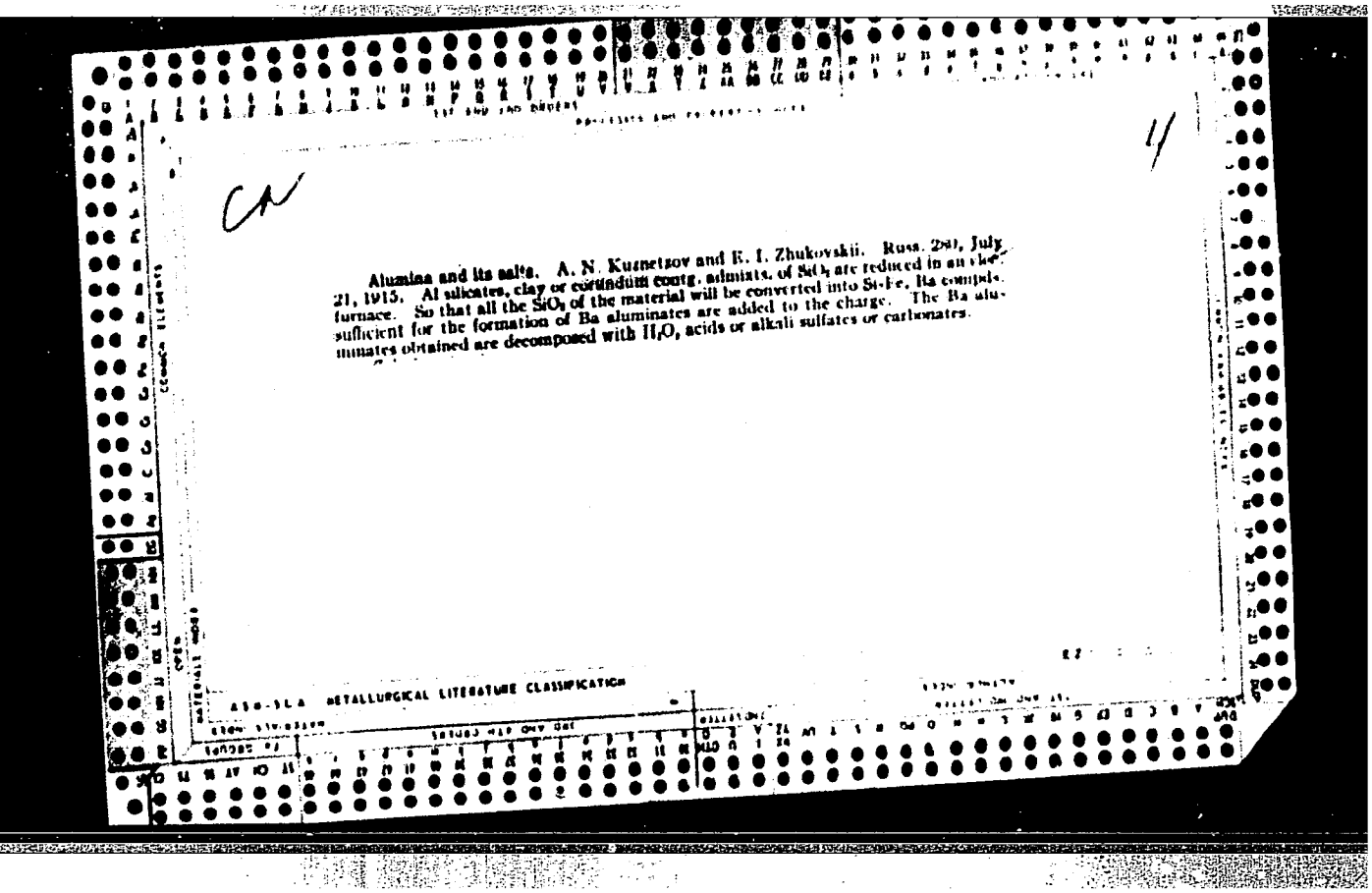
Design of a spiral-coil 300 Kev. cyclotron with external injection. Atom. energ. 19 no.5:442 N '65.

Magnetic field of a spiral-coil 300 Kev. cyclotron with external injection. Atom. energ. 19 no.5:443 N '65.

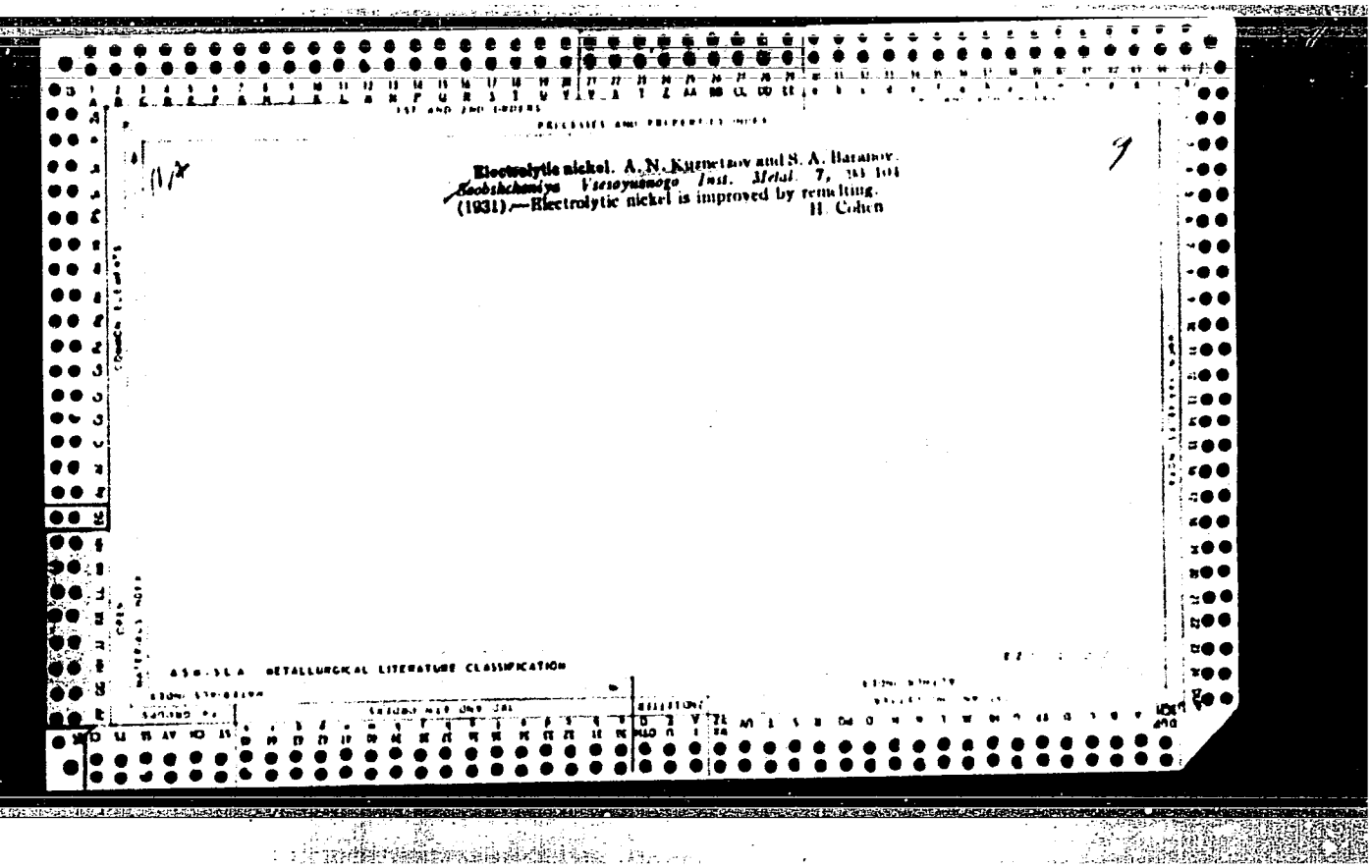
(MIRA 18:12)

KOSAREV, A.I.; KUZNETSOV, A.N.; PRONIN, A.T.; VOLKOV, A.I.

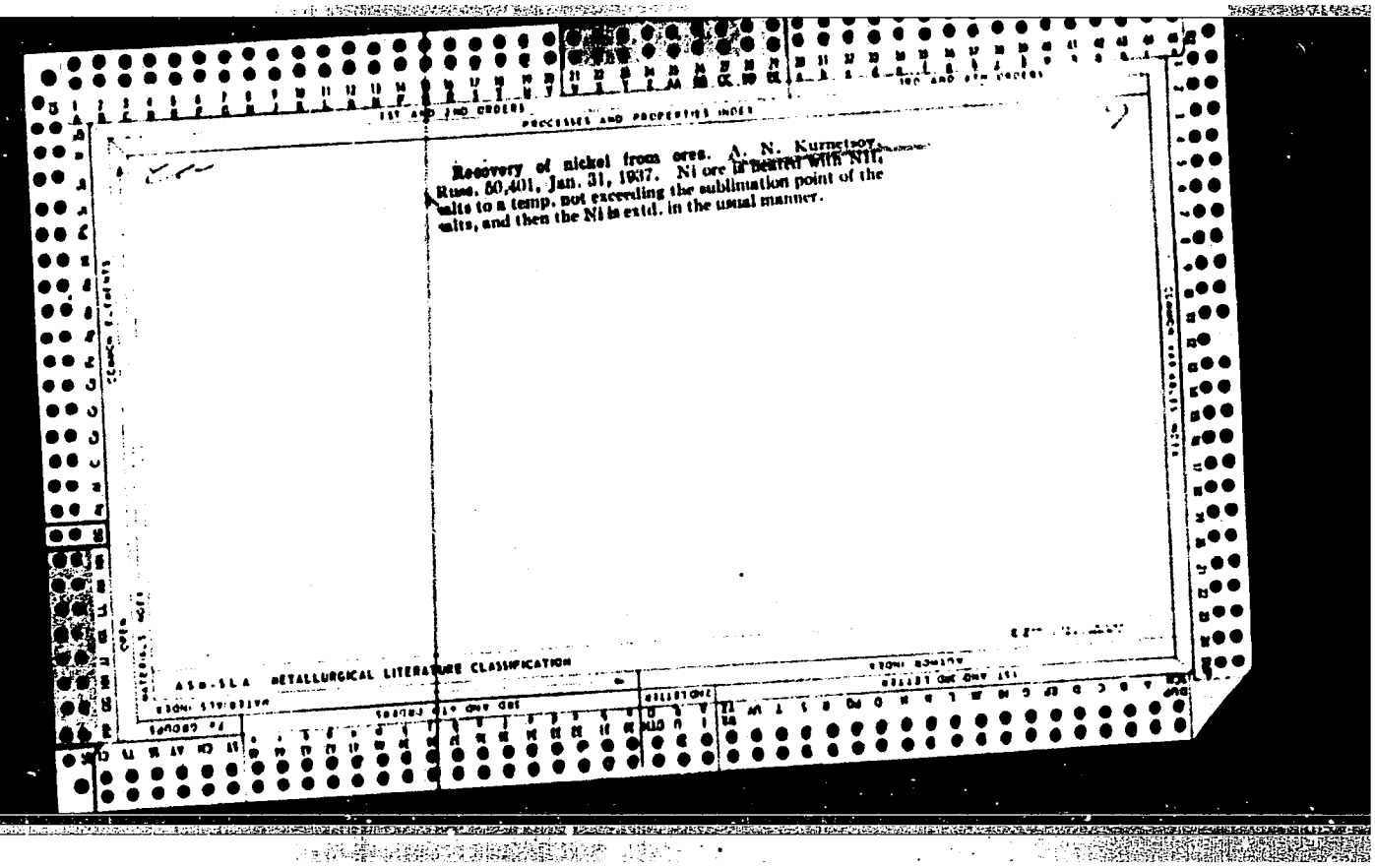
Chuck for mechanical testing of thin-walled tubular specimens.
Zav. lab. 31 no.11:1416 '65. (MIRA 19:1)

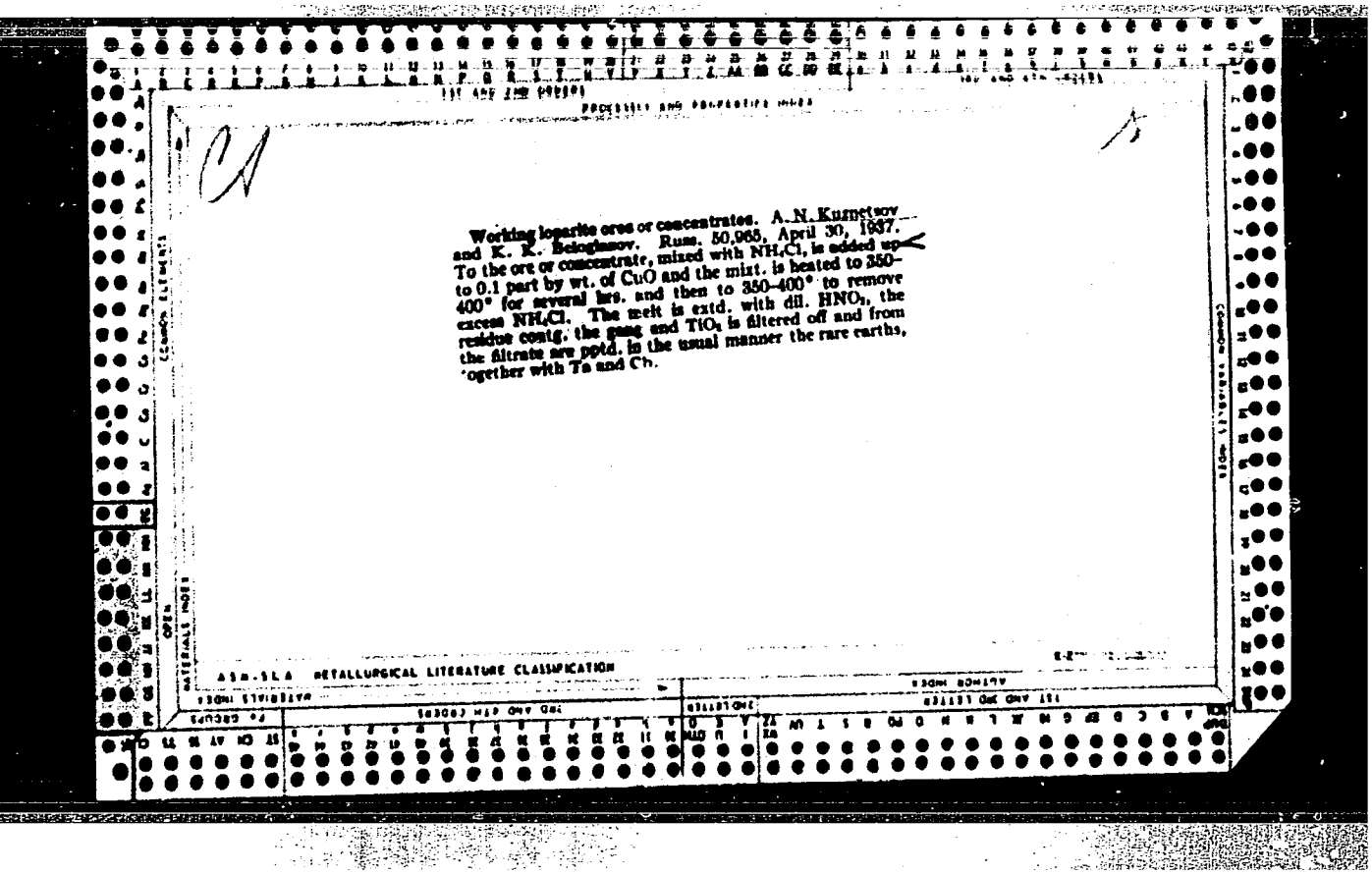


Aluminas and its salts. A. N. Kuznetzov and E. I. Zhukovskii. Russ. 28l, July 21, 1915. Al silicates, clay or corundum contg. silimits. of SiO_2 are reduced in an elec. furnace. So that all the SiO_2 of the material will be converted into Si-Fe, Ba compds. sufficient for the formation of Ba aluminates are added to the charge. The Ba aluminates obtained are decomposed with H_2O, acids or alkali sulfates or carbonates.

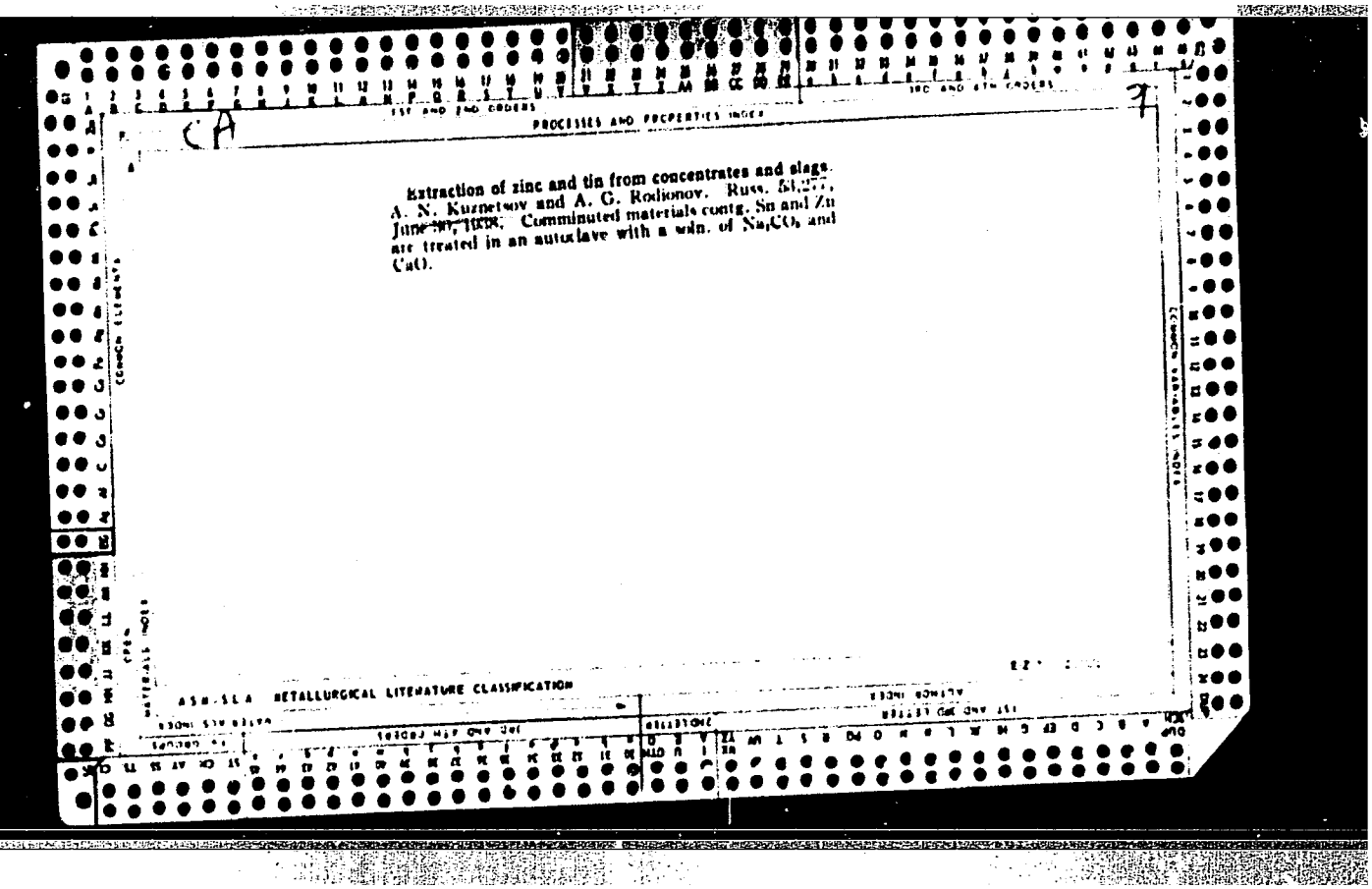


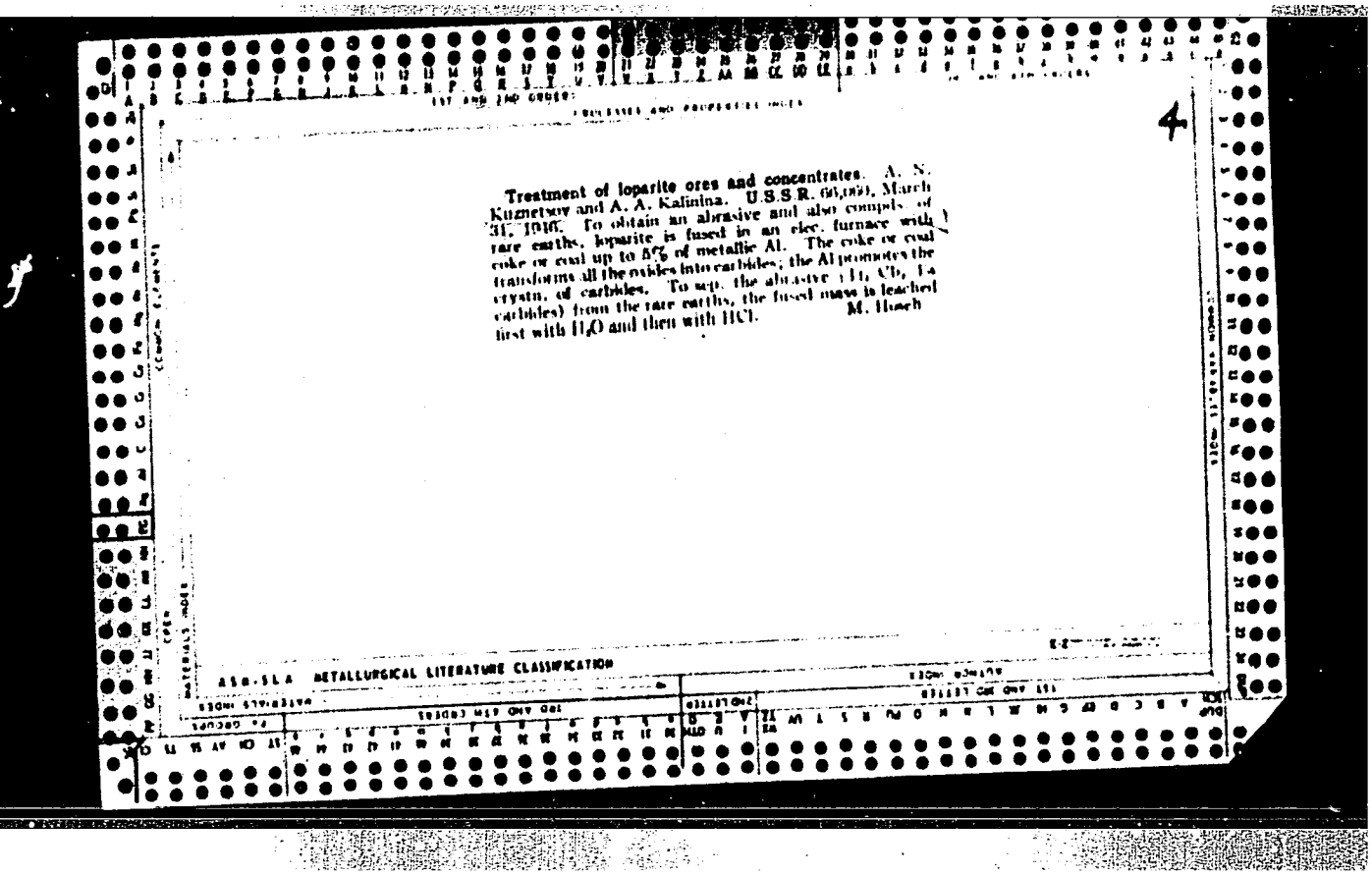
Electrolytic nickel. A. N. Kuznetsov and S. A. Baranov. *Izvestiya Vsesoyuznogo Inst. Metal.* 7, [illegible]
(1931).—Electrolytic nickel is improved by remelting.
H. Colen





Working loparite ores or concentrates. A. N. Kuznetsov and K. K. Beloglazov. Russ. 50,965, April 30, 1937. To the ore or concentrate, mixed with NH_4Cl, is added up to 0.1 part by wt. of CuO and the mixt. is heated to 350–400° for several hrs. and then to 350–400° to remove excess NH_4Cl. The melt is extd. with dil. HNO_3, the residue contg. the gang and TiO_2 is filtered off and from the filtrate are ppted. in the usual manner the rare earths, together with Ta and Cb.

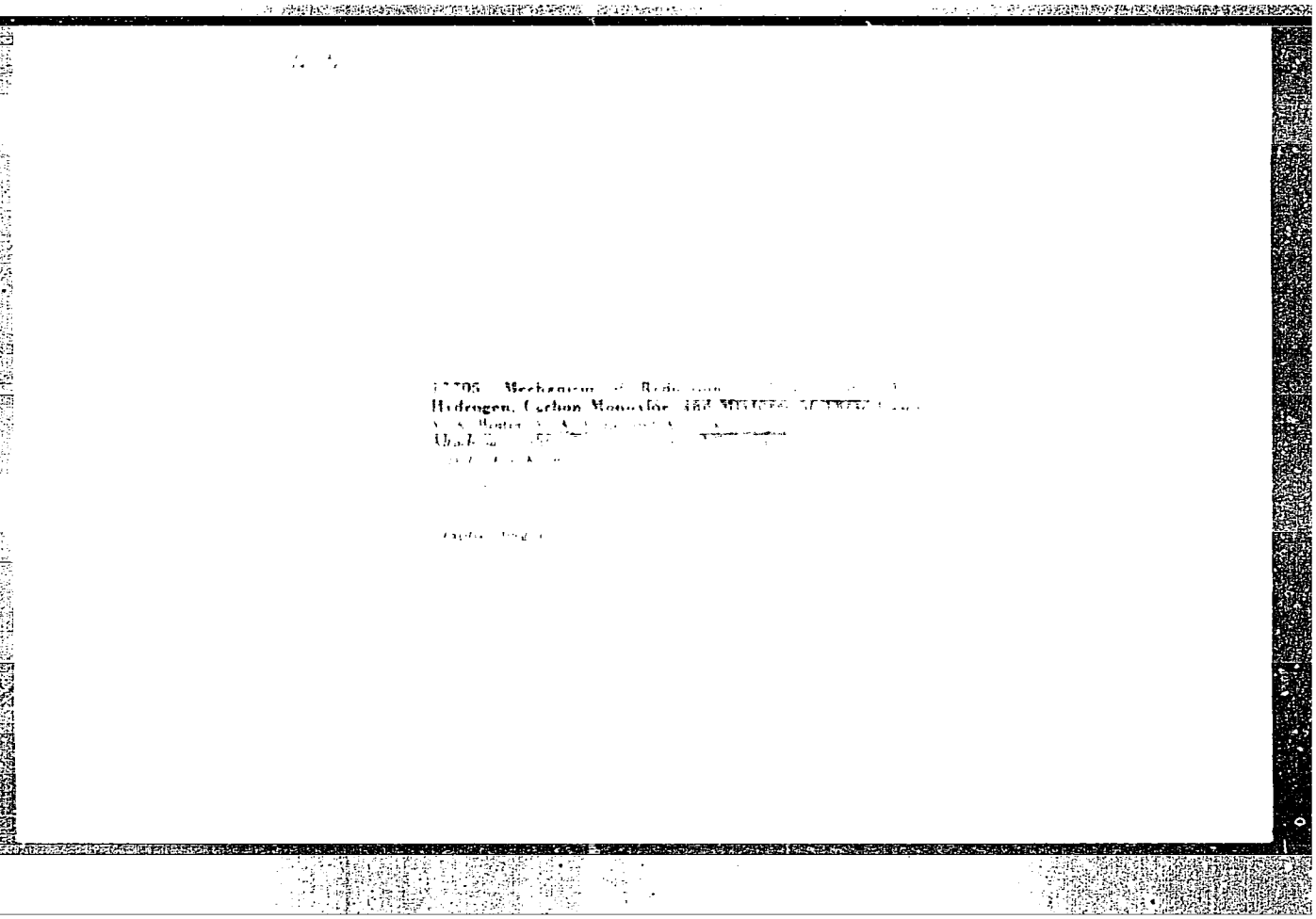




4

Treatment of loparite ores and concentrates. A. N. Kuznetsov and A. A. Kalinina. U.S.S.R. 66,099, March 31, 1946. To obtain an abrasive and also compds. of rare earths, loparite is fused in an elec. furnace with coke or coal up to 5% of metallic Al. The coke or coal transforms all the oxides into carbides; the Al promotes the crystn. of carbides. To sep. the abrasive (Ti, Cb, Ta carbides) from the rare earths, the fused mass is leached first with H_2O and then with HCl. M. Hasch

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



KUZNETSOV, A. N.

USSR/Chemistry - Iron Metallurgy - Ferrous Aug 51

"Mechanism of the Reduction of Iron Oxides With Hydrogen, Carbon Monoxide, and Mixtures of These Two Gases," V. A. Royter, V. A. Yuza, A. N. Kuznetsov, Chem-Technol Inst imeni F. E. Dzerzinskiy, Knepropetrovsk

"Zhur Fiz Khim" Vol XXV, No 8, pp 960-970

PA 190T20

KUZNETSOV, A. N.

USSR/Chemistry - Iron Ore Treatment Jan 53

"Characteristics of the Process of Reductive Magnetization of Iron Oxide Ores," V. A. Royter, V. I. Karmazin, V. A. Yuza, and A. N. Kuznetsov, Dnepropetrovsk Chem-Technological Inst im F. E. Dzerzhinskiy; Krivoy Rog Sci-Research Ore Mining Inst

Zhur Fiz Khim, Vol 27, No 1, pp 125-129

Effective reductive magnetization of iron oxide ores demands the selection of conditions favorable to gradual rather than zonal reduction of the oxides in the entire mass of the lumps or the whole layer of ore. Diffusion interferes with gradual reduction. In the reduction with H of individual pieces of quartzite, the gradual manner of the reduction is much more pronounced than in reduction with CO. H is hardly suitable for the reduction of a sufficiently long layer, because of the strong inhibiting effect of H_2O on the first stage of the reduction of Fe_2O_3. As a result of this inhibition formation of zones in the ore must occur. Gases containing a mixture of H and CO are of considerable advantage.

268T20

KUZNETSOV, A. N.

(2)

Reductive activity of hydrogen and carbon monoxide with respect to oxides of iron at low temperatures. A. N. Kuznetsov (F. E. Dzerzhinskii Chem.-Technol. Inst., Dneprodzerzhinsk). *Zhur. Fiz. Khim.* 27, 1808–18 (1953); cf. *C.A.* 46, 9391d.—The reduction of Fe_2O_3 (I) and Fe_3O_4 (II) by H and CO at temps. between 200 and 350° was studied. The initial rate of reduction (R_0) of I at 298° is 15–20 times as great with CO as with H. R_0 is the same for I and II in the postcatalytic region upon reduction by H. R_0 is 15–20 times as great for I as for II in the post-autocatalytic region upon reduction by CO. The over-all rate of reduction (R) of II is slightly greater with H than with CO. The marked decrease in R for the reduction of II by CO is due to a break in the reaction chain: $Fe_3O_4 \xrightarrow{CO} FeO^* \xrightarrow{CO} Fe^*$. The break is the result of reaction of an excited Fe atom with CO to give iron carbide. Reaction kinetics is discussed; schematic diagrams of the reaction chains are given. J. W. Loweberg, Jr.

KUZNETSOV, A.N.

Effect of the decomposition reaction of carbon monoxide on the reduction process of iron oxides at low temperatures. Trudy DKHTI no.6:72-81 '58. (MIRA 13:11)
(Carbon monoxide) (Iron oxide) (Reduction, Chemical)

KUZNETSOV, A.N.; KULISH, N.F.

Reducing activity of carbon monoxide and hydrogen in respect to cobalt oxides. Ukr.khim.zhur. 24 no.5:674-680 '58. (MIRA 12:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Carbon monoxide) (Hydrogen) (Cobalt oxides)

KUZNETSOV, A. N.

AUTHORS: Kuznetsov, A. N., Shestopalova, A. A., Kulish, N. F. 76-1-11/32

TITLE: The Kinetics and the Mechanism of the Reduction of Cobalt Oxides (O kinetike i mekhanizme vosstanovleniya okislov kobal'ta).

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 1, pp. 73-78 (USSR)

ABSTRACT: The authors refer to the fact that the oxygen compounds of cobalt were insufficiently investigated hitherto and the reduction processes of cobalt oxides were apparently not investigated at all. Examples of kinetic differential curves of the process of a reduction of $Co_3O_4 \cdot O_y$ by hydrogen at various temperatures are given. The authors show that cobalt oxides can be reduced more easily by means of hydrogen than by the corresponding iron oxides. This, moreover, is possible at a lower temperature: Fe_2O_3 is practically not reduced by hydrogen below 250°C while $Co_3O_4 \cdot O_y$ can even be reduced with a velocity well measurable at 195°C. The reduction of $Co_3O_4 \cdot O_y$ at the respective temperatures takes place in two

Card 1/4

stages. G. I. Chufarov and collaborators showed in ref. 3 that Co_3O_4 is reduced in two stages: $Co_3O_4 \rightarrow CoO$ and $CoO \rightarrow Co$. The authors state that this takes place only above 300°C where Co_3O_4. is reduced in 2 and correspondingly $Co_3O_4 \cdot O_y$ in 3 stages. Subsequently it appears, that in the case of the reduction of cobalt oxides, there exists a temperature limit, at the surpassing of which the Co-phase (which is accumulated in the phase just being reduced) becomes stable. The characteristics of the reduction of $Co_3O_4 \cdot O_y$ at above 300°C will be given in the next work.- In the first stage of the reduction of $Co_3O_4 \cdot O_y$ no autocatalytic development of the process takes place, the induction period is lacking. The reaction of the reduction begins with a maximum velocity which gradually decreases and reaches a minimum at the transformation point of the corresponding phases. In the 2nd stage the reduction process shows a clearly marked autocatalytic character. At lower temperatures of 195 to 200°C autocatalysis is less clearly marked than at higher

temperatures (271-296°C). At above 230°C in the second stage immediately after the autocatalytic range the velocity of the process is about half the value of the initial velocity of the $Co_3O_4.O_y$ reduction. In the range from 200-230°C, however, the velocity of the process increases in the second stage to the double of the initial velocity of the $Co_3O_4.O_y$ reduction. The apparent activation energy of the process $Co_3O_4 + 4H_2 \rightarrow 3Co + 4H_2O$ was 17,8 kcal. The experimental data speak convincingly in favor of the fact that the process of the reduction of cobalt oxides shows great similarity with that of the reduction of iron oxides. The authors are of opinion that in both cases the characteristics of the kinetic regularities are connected with the crystal-chemical transformation of the reducing solid phases, with the peculiar reaction - diffusion of elementary particles of crystalline lattices of reduced oxides. A scheme for the process in the reduction of the $Co_3O_4.O_y$-phase is given. According to the author's opinion the experimental data can be well explained

by means of this scheme.
There are 4 figures, and 5 references, 5 of which are Slavic.

ASSOCIATION: Chemical-Technological Institute, Dnepropetrovsk
(Dnepropetrovskiy khimiko-tekhnologicheskiy institut).

SUBMITTED: October 1, 1956

AVAILABLE: Library of Congress

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67278

SOV/180-59-4-9/48

AUTHORS: Kuznetsov, A.N. and Kulish, N.F. (Dnepropetrovsk)

TITLE: Some Peculiarities of the Kinetics and Mechanism of the Reduction Process of Cobaltocobaltic Oxide by Hydrogen

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 4, pp 52-58 (USSR)

ABSTRACT: The broad rules for the kinetics and mechanism of the reduction of metal have been formulated by G.I.Chufarov and his school (Ref 1), who have propounded the "adsorption-catalytic" theory. The present authors describe their attempt to formulate more precisely the detailed mechanism and kinetics of the reaction of Co_3O_4 by hydrogen and compare them with those observed by A.N.Kuznetsov et al, for Fe_3O_4 reduction (Ref 2,5). A pure artificial preparation of Co_3O_4 was reduced by a previously described (Ref 2,6) method in a closed circulating apparatus. The oxide was prepared from Co_3O_{4+y} by prolonged heating in air at 825°C to constant weight. 0.5 g Tablets, 11 mm in diameter and 3 mm thick, made from the powder obtained were reduced at 220 to 342°C with chemically pure hydrogen. The results are shown as plots of the rate of reduction (represented by the volume of

Card 1/4

Some Peculiarities of the Kinetics and Mechanism of the Reduction Process of Cobaltocobaltic Oxide by Hydrogen

hydrogen used by 1 g of initial oxide) in one minute against the degree of reduction (represented by the volume of hydrogen used for the reduction of 1 g of initial oxide). Fig 1 and 2 give curves for Co_3O_4 for various temperatures while Fig 3 gives corresponding curves for Fe_2O_3. The former is more easily reducible but below 300°C the general character is similar; the autocatalytic nature of the process is evident. To get more information on Co_3O_4 reduction above 300°C specimens were pre-reduced by hydrogen at 225 to 480°C until exactly 93 ml of hydrogen, ie that required to reduce 1 g of Co_3O_4 to CoO, had been consumed and the reaction was then frozen. The material obtained was analysed for metallic cobalt by a copper-sulphate or silver-nitrate method. The results (Fig 4) are represented as a plot of the ratio of the weight metallic cobalt per 1 g sample to that calculated for reduction according to the equation

$$Co_3O_4 + 4H_2 = 3Co + 4H_2O$$

Card 2/4 for the quantity of hydrogen consumed. Between 286 and

Some Peculiarities of the Kinetics and Mechanism of the Reduction Process of Cobaltocobaltic Oxide by Hydrogen

290°C a 1.8-fold reduction in metallic-cobalt content occurs; below and above this range the content is practically constant. This indicates that there is a temperature (291°C) below which cobaltous oxide becomes thermodynamically unstable and cannot accumulate in the stoichiometric quantity during the reduction of higher oxides. Although there are many similarities between the reduction of corresponding iron and cobalt oxides, the stages in the latter are much less distinct. The X-ray patterns from oxide partly reduced at 226 and 480°C in Fig 5a and 5b, respectively, show that in the first, metallic cobalt and cobaltocobaltic oxide are present; in the second, cobaltous and not cobaltocobaltic oxide is present. The reduction curve for Co_3O_4 only begins to show a break corresponding to $Co_3O_4 \rightarrow CoO$ at reduction temperatures over 300°C. The authors discuss this effect and the nature of the induction period for the reduction process, though they announce their intention of dealing with this also in a future paper. They show that the autocatalytic mechanism can explain the observed decrease

SOV/180-59-4-9/48

Some Peculiarities of the Kinetics and Mechanism of the Reduction Process of Cobaltocobaltic Oxide by Hydrogen

in metallic-cobalt content of a partially-reduced sample. X-ray patterns (Fig 6) of metallic cobalt obtained from Co_3O_4 by hydrogen reduction at different temperatures provide further information on the accumulation of phases. There are 6 figures and 17 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut Kafedra neorganicheskoy khimii (Dnepropetrovsk Chemical-Technological Institute, Chair of Inorganic Chemistry)

SUBMITTED: February 19, 1959

Card 4/4

KUZNETSOV, A.N.

Kinetics and mechanism of nickel oxide reduction by hydrogen. Zhur.fiz.khim. 34 no.1:32-38 Ja '60. (MIRA 13:5)

1. Khimiko-tekhnologicheskiy institut imeni F.E.Dzerzhinskogo, Dnepropetrovsk.
(Nickel oxide) (Hydrogen)

KUZNETSOV, A.N.; KULISH, N.F.

Some relationships in the reduction of metal oxides of the iron family. Zhur. fiz. khim. 36 no.4:720-725 Ap '62. (MIRA 15:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Iron group) (Oxides)

L 3777-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) GS
ACCESSION NR: AT5007946 S/0000/64/000/000/0658/0661

AUTHOR: Gladyshev, V. A.; Katsaurov, L. N.; Kuznetsov, A. N.; Martynova, L. P.; Moroz, Yu. M.

TITLE: Concerning the input of ion beam into a cyclotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 658-661

TOPIC TAGS: cyclotron, particle beam

ABSTRACT: The problem of the external injection of ions into a cyclotron remains especially pressing in connection with the problem of the acceleration of polarized ions, because the source of polarized particles, like some other complex sources, cannot be situated at the center of the cyclotron. Since, in the case of external injection, the acceleration begins with a certain initial energy, it is possible to avoid a number of difficulties connected with the first revolutions in the central portion of the cyclotron. One of the procedures for solving this problem is to input the beam along the vertical axis of the cyclotron and turn it by an electrostatic deflecting system through 90° into the median plane. The most substantial deficiencies, it seems, of axial input of the beam is the considerable losses and

Card 1/4

the complexity of the deflecting system. The present report indicates how it is possible to realize external beam injection in the median plane of the magnet. This can be done especially simply in sector cyclotrons. In a nonhomogeneous magnetic field, charged particles experience a drift across the gradient of the magnetic field. It is expedient to take advantage of this in the sector cyclotron by directing the beam of particles so that they drift up to the central region of the cyclotron along the boundary of one of the sectors. In the central region it is possible with the help of a cylindrical electrostatic field to transfer the particles to the trajectory required later. In the case of a homogeneous magnetic field, which almost always holds true at the central region of sector cyclotrons, the minimum electrical field strength $\mathcal{E}_{min}$ in the cylindrical condenser that is necessary for the transfer of the particles from one trajectory to another can be represented by the formula

where W is the kinetic energy of the particles in kev; R is the radius of curvature (for a nonrelativistic single-charged ion, $R = 4.57 \cdot 10^3 \frac{\sqrt{kM}}{H}$);

M is the mass of the ion in units of the mass of the nucleon; ϕ is the angle between the trajectories at the point of their intersection. As it turns out, it is possible to choose the place for injecting the particle beam such that it will always be focused on its path along the magnet sector. On the path to the central region of the cyclotron it is possible to describe a series of loops, and also the frequency of a particle's revolution (more precisely, the frequency of loop formation). The quality of the magnetic focusing of the particles is characterized by the ratio of the frequencies of the particles' horizontal and vertical oscillations to the mentioned frequency of loop formation. The radial focusing of the ions in the magnetic system considered almost does not differ from focusing in a homogeneous magnetic field. Similar considerations hold for the vertical focusing of the ions. The conditions for the stability of the vertical motion of the ions are characterized by inequalities involving the magnetic field in the gap between the sectors in the region of beam passage. In the case of the authors' cyclotron, there always exists a wide interval of initial distances of the beam from the sector boundary for which the injected ions can reach the central region of the cyclotron magnetic without experiencing defocusing. The experimental verification of the possibility of external injection by the considered method was carried out on a three-sector cyclo-

L 3777-66
ACCESSION NR: AT5007946

tron with straight sector borders (magnet diameter--720 mm; accelerated particles--350 Kev deuterons). The experimental set-up and results are described in the present report. Orig. art. has: 4 figures.

ASSOCIATION: Fizicheskiy institut imeni P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 001

Card 4/4

L 29798-66 EWT(m)/EWP(t)/ETI IJP(c) JD/GD/JH

ACC NR: AT6016425 (A) SOURCE CODE: UR/0000/65/000/000/0173/0178

AUTHORS: Zakharov, Ye. D.; Sorokin, N. A.; Kuznetsov, A. N.; Sinyavskiy, V. S.; Gusev, V. P.; Kuznetsova, K. N.; Tsay, A. F.; Yegorova, L. S. 54 B+1

ORG: none

TITLE: Dependence of the stability of the solid solution in the alloy D16 on the chemical composition

SOURCE: AN SSSR. Institut metallurgii. Metallovedeniye legkikh splavov (Metallography of light alloys). Moscow, Izd-vo Nauka, 1965, 173-178

TOPIC TAGS: aluminum ~~containing~~ alloy, solid solution, magnesium containing alloy, copper containing alloy, manganese containing alloy / D16 aluminum alloy

ABSTRACT: The stability of solid solution in D16 type aluminum alloys was studied as a function of the alloy composition. The stability of the solid solutions was determined by the method of step-wise tempering at 250, 300, 350, 400, and 450C for periods of 0.5, 1, 2, 3, 5, 7, 10, 20, and 60 min. After tempering, the specimens were naturally aged for a period of 10 days, then their electrical conductivity, strength limit, relative elongation, and flow limit were determined. The experimental results are shown graphically (see Fig. 1). On the basis of the experimental data C-curves for the stability of solid solution were constructed (see Fig. 2). The optimum alloy composition results from: less than 6% total copper

Card 1/3

L 29798-66

ACC NR: AT6016425

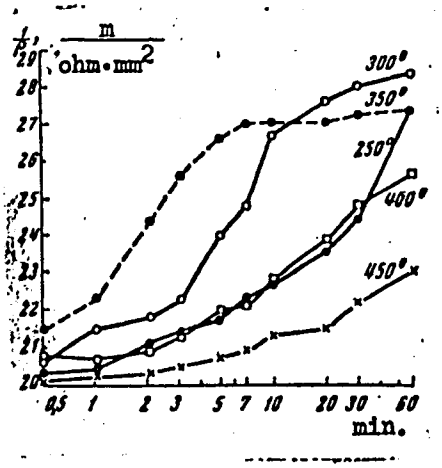


Fig. 1. Change in the electrical conductivity of alloy No. 1 (3.91% Cu; 1.2% Mg; 0.5% Mn) as a function of the duration of isothermal tempering at intermediate temperatures.

Card 2/3

L 29798-66

ACC NR: AT6016425

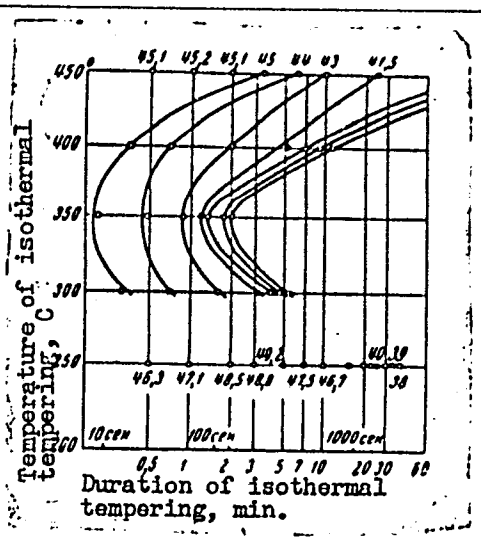


Fig. 2. C-type diagram for the stability of the solid solution in alloy No. 1, constructed from data for the change in the strength limit (for normal tempering σ_f = 45.1 kg/mm^2).

and magnesium content for a total of less than 4.8% copper content. The manganese content should be less than 0.6%. Orig. art. has: 1 table and 5 figures.

SUB CODE: 11/ SUBM DATE: 16Sep65/ ORIG REF: 001/ OTH REF: 002

Card 3/3

KUZNETSOV A. N.

AUTHORS: Yurikov, P.A., and Kuznetsov, A.N., Engineers 91-58-6-28/39

TITLE: People Struck by Lightning Through a Wiring System for Lighting (Sluchay porazheniya lyudey molniyey cherez osvetitel'nuyu provodku)

PERIODICAL: Energetik, 1958, Nr 6, pp 27-28 (USSR)

ABSTRACT: The article describes how several people were struck by lightning due to electromagnetic waves being conveyed along overhead lighting wires in the absence of precautionary measures such as the grounding of hooks on leads described by P.A. Yurikov in "Energetik", 1955, Nr 10. There is one figure.

AVAILABLE: Library of Congress

Card 1/1 1. Lightning-Hazards

SOV/106-58-11-8/12

AUTHOR: Kuznetsov, A.N.

TITLE: Recommendations for the Choice of Distribution Oscillator for a Start-Stop Regenerative Telegraph Repeater (Rekomendatsii k vyboru generatora raspredelitelya dlya startstopnoy elektronnoy regenerativnoy telegrafnoy translyatsii).

PERIODICAL: Elektrosvyaz', 1958, Nr.11, pp.62-68 (USSR)

ABSTRACT: An analysis is given of the operation of the regenerative repeater RS-13 when used with the ST-35 equipment. It is shown that operation does not take place in the optimum time-regime and in consequence its stability is lowered. Means are proposed for avoiding this shortcoming. The repeater, which has been described in Refs.1 and 2, is shown diagrammatically in Fig.1. The correcting circuit for start and stop of the sinusoidal oscillator is a combination of kipp-relay and the contacts of a polarised relay. An analysis is made of the operation of the circuit when the speed of working is allowed to vary over the permissible limits of 2%. Fig.2 shows the relevant waveforms when communication is established between trans-

Recommendations for the Choice of Distribution Oscillator for a Start-Stop Regenerative Telegraph Repeater.

mitter and repeater. Fig.2a refers to the normal operating speed and it will be seen that the duration of the contact during the start and stop cycle is the same at transmitter and repeater and is equal to 7.06Δ, where Δ is 22.39 microseconds. Fig.2b refers to the lower limit of sending speed; the critical duration of the elementary code-pulse is 24.25 microseconds. The upper limit of sending speed depends on the charging time of condenser c in the kipp-relay; waveforms are in Fig.2v, whence it is deduced that the theoretical correcting power of the repeater is 12.11%. When considering the mechanism of operation between repeater and receiver use is made of the description of the working of the ST-35 equipment put forward by Prof. N.B. Zeliger (Ref.3). Fig.3 may be used to determine to what extent the receiver responds to variation in sending speed when relayed by the repeater. Curve 1 is the start-stop cycle of the ST-35 equipment at normal operating speed. Curve 2 is the output cycle from the repeater at the lower limit of speed, Curves 3 and 4 show the operation at 2% increase

Recommendations for the Choice of Distribution Oscillator for a Start-Stop Regenerative Telegraph Repeater.

and decrease respectively. It will be seen that variations in sending speed are registered only in the duration of the stop pulse. The most arduous conditions for the receiver are when it cannot completely realise its own limiting reduction in velocity and the transmitter is operating at its upper limit. There is a negative margin of 0.96% in operating speed which in practice can result in the repeater delivering pulses of the wrong sign. Practical experience confirms this possibility. The security of operation may be increased if the time of operation of the correcting circuit and the repeater oscillator are reduced. It will be seen from the first three graphs of Fig.2 that regeneration of the stop pulse occurs at a time $T_0 = 6.5t$ while the sine-wave generator must work for a time $\tau = 6.75t$. If these two times were made equal, then the time 0.25t during which the stop pulse is being produced could be used as a supplementary increase in transmitter speed. This would increase the correcting power of the repeater to

 33.35%. It would also guarantee certain operation of the

Recommendations for the Choice of Distribution Oscillator for a Start-Stop Regenerative Telegraph Repeater.

equipment over the whole range of speed variation. Fig.4 shows an improved form of distribution oscillator using a circuit described in Refs.4 and 5. It has the property of producing a rectangular waveform at the instants when a sine wave goes through zero. The practical advantage of the circuit is that it is, in effect, a contactless switch. There are 4 figures and 5 Soviet references.

SUBMITTED: January 17, 1958.

BONDARENKO, A.E., inzh.; RYTSLIN, A.M., inzh.; KHAYTUN, E.I., inzh.; BATKHON, I.S., inzh.; KUZNETSOV, A.N., inzh.

Bus-tie breakers of step-down substations. Elek. sta. 29 no.2:90-92 F '58. (MIRA 11:3)
(Electric circuit breakers)

KUZNETSOV, A.N.

Use of the method of telluric currents in the southeastern part of the West Siberian Plain. Razved.i prom.geofiz. no.44:78-85 '62. (MIRA 15:7)

(West Siberian Plain--Electric prospecting)

KUZNETSOV, A.N.

Accuracy of parameter K determination by the method of telluric currents. Razved. i prom. geofiz. no.48:63-65 '63 (MIRA 18:1)

KUZNETSOV, A.N.

Technique of modeling frequency electromagnetic sounding.
Razved. i prom. geofiz. no.51:98-101 '64.

KUZNETSOV, A.N.

Prospects for the use of induction channel furnaces for smelting aluminum and its alloys. TSvet. met. 38 no.4:80-83 Ap '65. (MIRA 18:5)

KUZNETSOV, A.N.

Use of boreholes where casing has been set as feeding electrodes in electric prospecting. Razved. geofiz. no.5:96-101 '65.
(MIRA 18:9)

L 9684-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) JD

ACC NR: AP5027473 SUB CODE: UR/0032/65/031/011/1416/1416

66
63
63

AUTHOR: Kosarev, A. I.; Kuznetsov, A. N.; Pronin, A. T.; Volkov, A. I.
44.55 44.55 44.55 44.55

ORG: none

TITLE: Clamping chuck for mechanical tests of thin-walled tubular specimens

SOURCE: Zavodskaya laboratoriya, v. 31, no. 11, 1965, 1416

TOPIC TAGS: clamping chuck, metal test, test facility, high temperature strength, metal tube

ABSTRACT: High-temperature strength tests 4 of thin-walled tubular specimens involve difficulties in attaching the specimens to the test machines. These difficulties could previously be circumvented only by testing extra-long tubular specimens or by welding special mounts onto the specimens. To obviate these difficulties, the authors designed a self-centering chuck (Fig. 1) which makes it possible to test tubular specimens of any length. The chuck consists of housing 1, three cone-shaped bushings 2 with inclination angle of 4.5-5° and threaded inner surface, and connecting sleeve 3 serving to tighten the hold on the specimen and connect the chuck to the testing-machine clamp. To enhance the rigidity of specimen 4, plug 5 is inserted over the butt end of the specimen. Clamping chucks of this design have been used by the authors in the tests of tubular specimens of VTI-1 titanium alloy at the temperature
14 v7

Card 1/3

L 9684-66

ACC NR: AP5027473

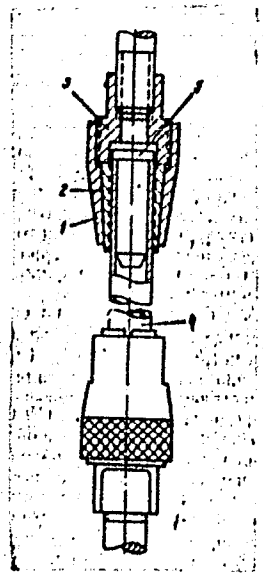


Fig. 1 Clamping chuck

Card 2/3

L 9684-66

ACC NR: AP5027473

of 450°C as well as of thin-walled aluminum-alloy tubes with diameter of 16 mm and less, produced by cold pressing at normal and elevated temperatures. The parts of clamping chucks for the testing of aluminum-alloy tubes may be made of 40Kh or 50 steels, and the bushings -- of tool steels, while the parts of chucks for testing tubes of heat-resistant materials should best be made of EI437B or EI929 chrome-nickel alloys. For tubes with similar outside diameters the same clamping chuck may be used on merely replacing the bushings. Orig. art. has: 1 figure.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 3/3

KUZNETSOV, A.P.

Characteristics of coal and gas outbursts. Trudy Inst.gor.dela. Sib.otd.AN SSSR no.1:177-190 '58. (MIRA 12:11)
(Coal geology) (Geochemistry)

KUZNETSOV, A. P.

Mechanism of coal and gas outbursts. Trudy Inst.gor.dela.Sib. otd.AN SSSR no.1:191-205 '58. (MIRA 12:11)
(Geochemistry) (Subsidences (Earth movements))

KUZNETSOV, A.P., Cand Tech Sci --(disc) "Study of phenomena of sudden ejections of coal and gas in the working of coal beds of the Kuznets basin." Tomsk, 1959. 15 pp (Tomsk Order of Labor Red Banner Polytech Inst im S.M. Kirov), 150 copies (KL, 31-59, 115)

KUZNETSOV, A.P.; MOMOT, B.P.

Outbursts of coal and gas abroad. Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:200-203 '60. (MIRA 14:4)
(Mine gases)

KUZNETSOV, A.P.

Through study of the problem of outbursts of coal and gas.
Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:225-239 '60.
(MIRA 14:4)

(Mine gases)

CHINAKAL, N.A.; KUZNETSOV, A.P.

Phenomena of sudden outbursts of coal and gas and some characteristics of coal beds in the outburst areas. Izv. Sib. otd. AN SSSR no. 11: 51-58 '62. (MIRA 17:9)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR, Novosibirsk.

L 44921-66 EWT(l)/EWA(h)/FCC/FSS-2/EWA(d) IJP/GW/JT/GD-2
ACC NR: AP6018095 SOURCE CODE: UR/0203/66/006/002/0185/0189
AUTHOR: Krasnopol'skiy, V. A.; Kuznetsov, A. P.; Lebedinskiy, A. I.
ORG: Institute of Nuclear Physics, Moscow State University (Moskovskiy gosudarstvennyy universitet, Institut yadernoy fiziki)
TITLE: Earth's ultraviolet spectrum from measurements on the satellite Kosmos-65
SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 2, 1966, 185-189
TOPIC TAGS: uv spectrum, solar spectrum, scientific satellite, electromagnetic wave reflection/Kosmos-65 scientific satellite
ABSTRACT: The satellite Kosmos-65 made measurements of atmospheric reflection of radiation in the region 2250-3070 A with a resolution of 15 A. This paper describes two spectra: a typical spectrum and a spectrum with maximum readings. Both spectra were observed near the equator with a position of the sun close to the zenith. In a comparison of the observed and computed spectra it was found that the first contain a considerable number of details which are missing in the computed spectra. This occurs because the computed curves were constructed using the solar spectrum, averaged in a 100 A interval, and therefore were greatly smoothed. For the most part, however, the observed and computed spectra and their absolute intensities coincide. There is some difference at the edges of the spectra: it was not possible to detect a rise at $\lambda < 2400$ A and the drop at $\lambda \sim 2950$ A was less steep than might be expected using the computed curves. The authors give a comparison of the measured spectra and the results of photometric observations on rockets and satellites. The authors thank Yu. V. Yaremenko, V. P. Malin and M. B. Glot for their assistance in preparing this experiment. Orig. art. has: 4 figures. [JPRS]

Card 1/1 SUB CODE: 03, 04, 22/ SUBM DATE: 24Nov65/ ORIG REF: 003/ OTH REF: 009

KUZNETSOV, A.P. (Novosibirsk); KURSHIN, L.M. (Novosibirsk)

Solutions based on the theory of strengthening to certain problems of the stability of plates and shells in conditions of creep. PMTF no.4:84-89 N-D '60. (MIRA 14:7)
(Elastic plates and shells)
(Creep of materials)

S/207/61/000/006/019/025
A001/A101

AUTHOR: Kuznetsov, A. P. (Novosibirsk)

TITLE: Stability of compressed Duralumin rods under creep conditions

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1961, 160-161

TEXT: An investigation of stability of compressed rods under creep conditions was conducted on 66 Д16Т (D16T) Duralumin specimens 6 mm in diameter and 100 mm long. They were heated to 250°C and held for 1 hour, followed by the application of a constant longitudinal load until the failure of the rods. The results of the experiments are tabulated and presented graphically. The creep process can be described by the following equation: $\dot{p}p^{\alpha} = A\sigma^{n}$, where the value of the constants, derived from the processing of the observational data, are as follows: $A = 8.995 \times 10^{-7} \frac{mm^{2n}}{kg^{n}\,hr}$, $n = 1.358$ for $\sigma < 9 \frac{kg}{mm^2}$ and $A = 3.476 \times 10^{-12} \frac{mm^{2n}}{kg^{n}\,hr}$, $n = 7.31$ for $\sigma < 9 \frac{kg}{mm^2}$. (no values for α are given).

Card 1/2

S/207/61/000/006/019/025
Stability of compressed Duralumin rods under creep... A001/A101

The values of critical longitudinal strain are calculated and presented graphically. Comparing these values with predictions of various theories, the author finds that the semi-empirical hypothesis by G. Gerard (A Creep Buckling Hypothesis. JAS, 1956, v. 23, no. 9) corresponds best to the experiments. There are 5 figures, 1 table and 5 references, 4 of which are Soviet-bloc.

SUBMITTED: August 3, 1961

Card 2/2

24 4200

S/207/62/000/003/011/016
I028/I228

AUTHOR: Kuznetsov, A. P. and Kurshin, L. M. (Novosibirsk)

TITLE: Stability of circular cylindrical shells under conditions of creep

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1962, 66–72

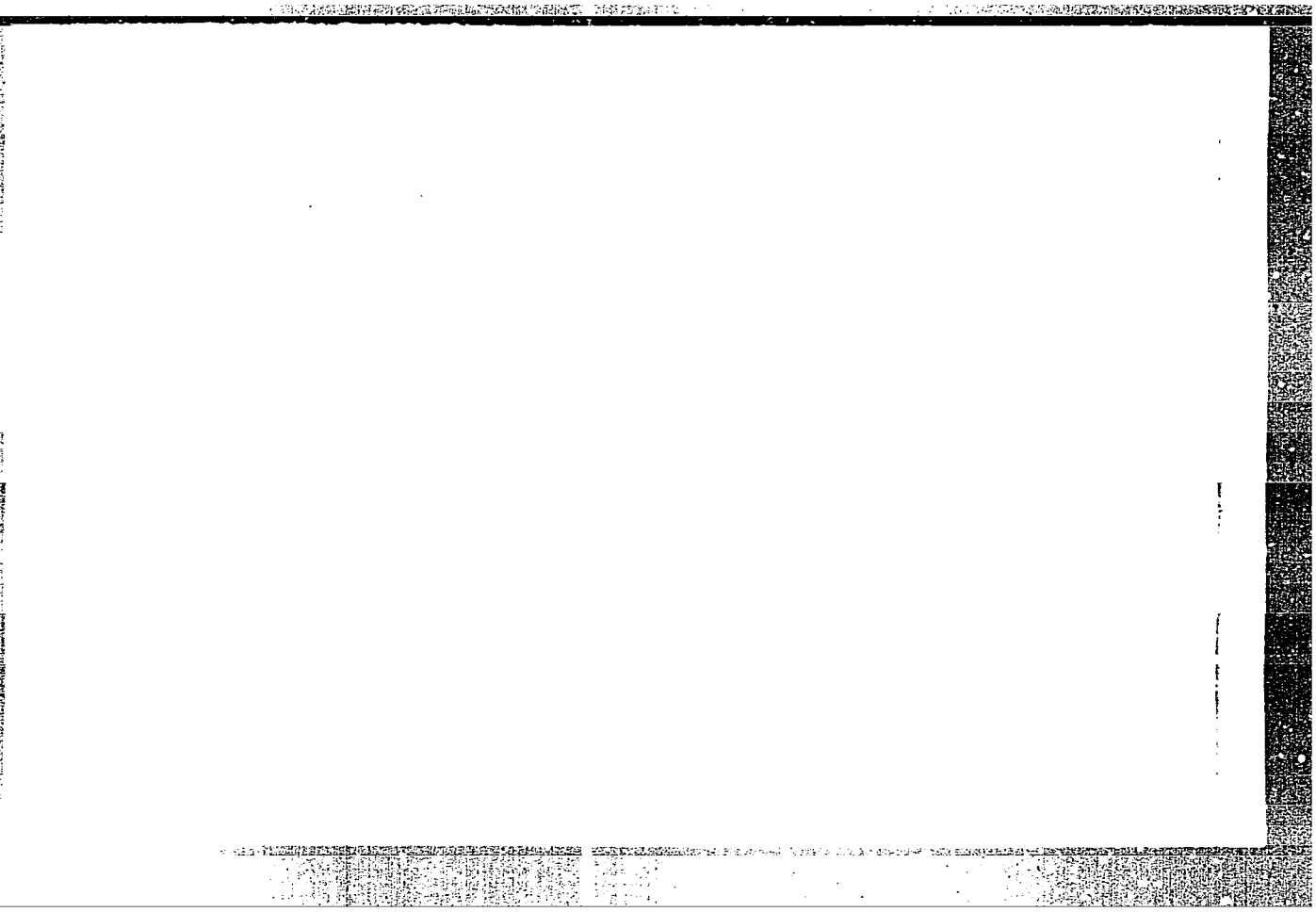
TEXT: The problem of stability under conditions of creep is treated on the basis of an analysis of the accelerations of disturbed motions. Ths state of the cylindrical shell is considered as unstable if the velocity of the disturbed motion produced at a given moment under the influence of a disturbance increases with time. The equations determining the velocity and acceleration at the initial moment of the disturbed motion are established, and the equations of stability obtained from them. These equations are solved for the case of longitudinal compression. There are 2 figures.

SUBMITTED: November 28, 1961

Card 1/1

AUTHOR: [redacted]

[redacted] in sheet duralumin D16AT subjected to constant and cyclic loads



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928110016-3"

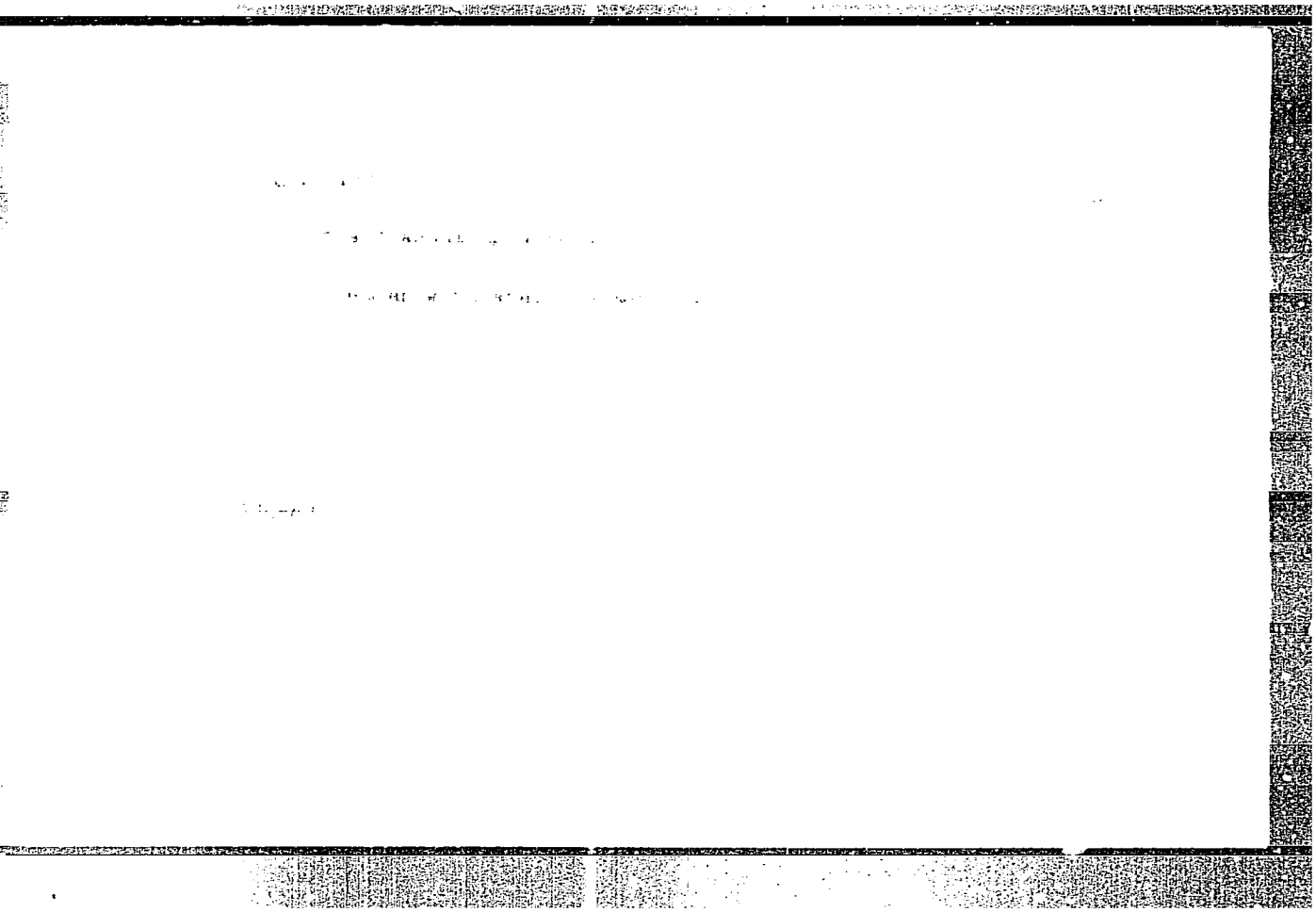
KUZNETSOV, A.P.; KURSHIN, L.M.; LIPOVTSEV, YU.V. (Novosibirsk)

"On the solution of the problem of creep buckling of shell on the basis of geometrically non-linear theory".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 90-98

shell, cylindrical shell, shell

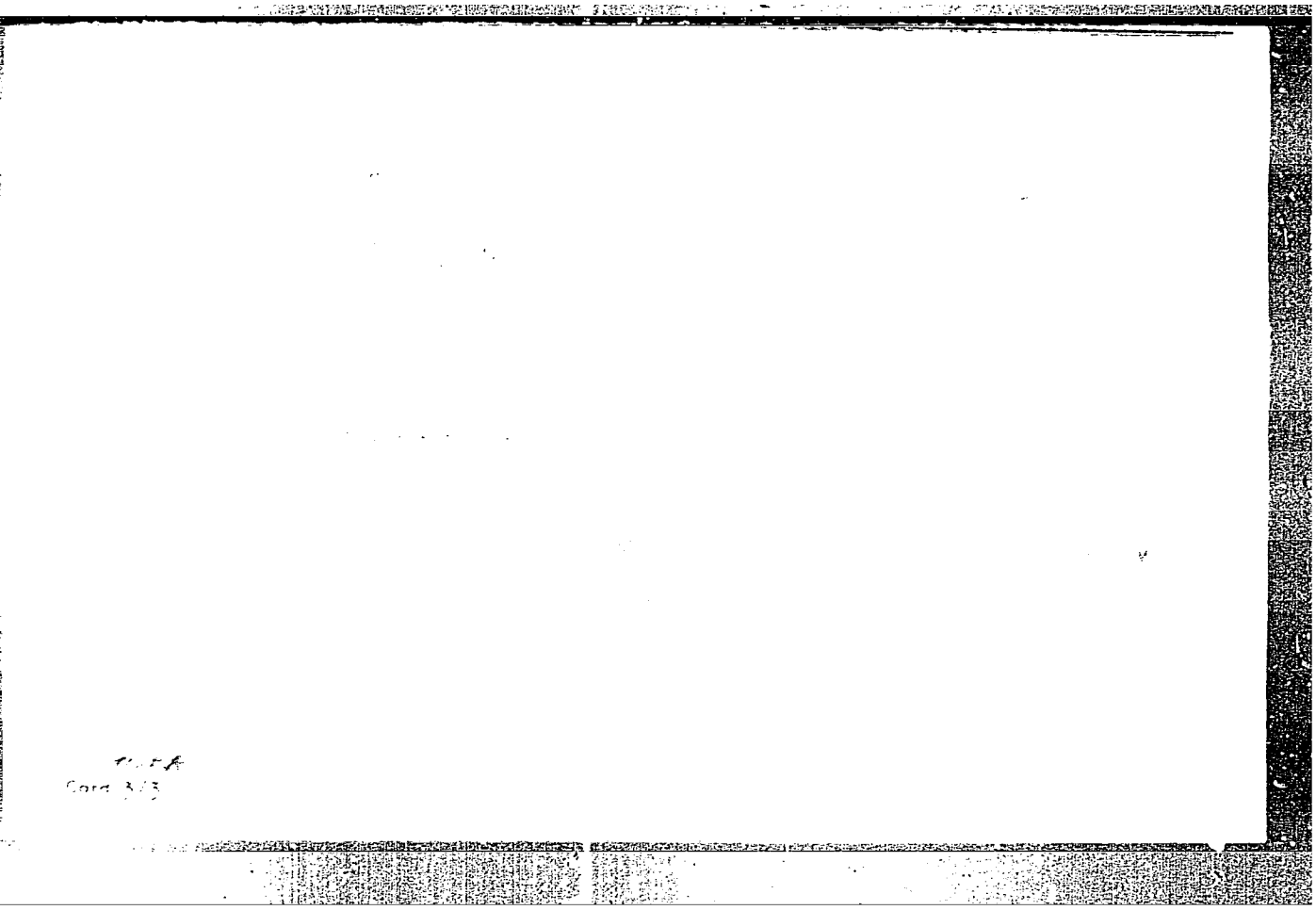


APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928110016-3"

ABSTRACT: The authors conducted experimental studies on the [illegible]

moment of dent appearance. The

$$e_n = v_r + \frac{1}{2} \ldots$$



ACCESSION NR: AP5021910 UR/0207/65/000/004/0128/0131

AUTHOR:

were tested on a TsDM-30 hydraulic testing machine[V] equipped with automatic load

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928110016-3"

KUZNETSOV, A. P.

KUZNETSOV, A. P.: "The effect of additives on the fatigue stability of cement solutions". Kiev, 1955. Min Higher Education Ukrainian SSR. Kiev Construction Engineering Inst. (Dissertations for the Degree of Candidate of Technical Sciences.)

So: Knizhnaya letopis' No. 49, 3 December 1955. Moscow.

KUZNETSOV,A.P., dotsent

Effect of admixtures on the fatigue strength of cement mortars.
Stroi.prom.33 no.6:36-38 Je'55. (MLRA 8:10)
(Cement)

124-1957-10-12276

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 148 (USSR)

AUTHOR: Kuznetsov, A. P.

TITLE: The Effect of Additives on the Life Expectancy of Cement Mortars Under Fully Reversed Alternating Stresses (Vliyaniye dobavok na dolgovechnost' tsementnykh rastvorov pri znakoperemennykh napryazheniyakh)

PERIODICAL: Izv. Kuybyshevsk. s.-kh. in-ta., 1957, Vol 12, pp 191-209

ABSTRACT: Bibliographic entry

Card 1/1

KUZNETSOV, A.P., inzh.

Road beds made of cement-reinforced weak materials. Avt.dor. 26 no.9:14-15 S '63. (MIRA 16:10)

KUZNETSOV, A.P., inzh.

Effect of aggregates on the freezing of gravel materials. Avt. dor. 27 no.9:14-15 S '64. (MIRA 17:11)

KUZNETSOV, A.P., inzh.

Building beds of weak limestone for roads in Leningrad Province. Avt. dor. 25 no.2:10-11 F '62. (MIRA 15:2)
(Leningrad Province--Road materials)

KUZNETSOV, A.P., inzh.

Frost resistance of nonconditioned gravel and sand materials strengthened with cement. Avt.dor. 25 no.9:23-25 S '62. (MIRA 15:9)

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Determining the moisture content of soils with calcium carbide. Avt. dor. 26 no.1:26 Ja '63. (MIRA 16:6)

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Frost resistance of cemented road materials. Avt. dor. 28 no.2:
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USSR/Metals, Bearing Alloys — Jan/Feb 1947

"Increasing the Durability of Bearing Surfaces by Applying a Layer of 'Sormite'," A. P. Kuznetsov, Candidate in Technical Sciences, 3 pp

"Sudostroyeniye" No 1

"Sormite" belongs to the group of metals known as stellites and has the following composition: Cr 26 - 30%, Ni 3 - 6%, C 2.5 - 3.3%, Mn up to 1%, Si 3.5 - 4.5% and over 50% Fe. Specific gravity is 7.3 and melting point is 1300°. The author presents cross-section views of bearings showing the points where this metal alloy should be applied in order to give the most advantageous service.

29737

A. P.

PA 28T100

USSR/Ships - Construction
Propellers, Ship

May/Jun 1947

"Device for Controlling the Geometric Measurements of Propeller Vanes," A. P. Kuznetsov, Candidate in Technical Sciences, 1 p

"Sudostroyeniye" No 3

The author gives a brief description of a machine for controlling the pitch of propeller vanes at the same time that they are being finished. He presents three diagrams of the templet assembly. A. S. Godyeyev, A. P. Rybakov, and N. K. Vasil'yev assisted the author in the development of this piece of equipment.

28T100

SMO3

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25572. KUZNETSOV, A. P.
Deformatsiya krupnykh zagotovok v protsesse obrabotki. (K obrabotke kolenchatykh valov dlya sudovykh mashin). Trudy Gor'k. Industr. in-ta im. Zhdanova, T. VII, Vyp. 1, 1948, s. 35-44. Bibliogr: 14 Nazv.

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"The specifications of pulsations and displacements in naval machine construction," Trudy Gor'k. industr. in-ta im. Zhdanova, Vol. VII, Issue 2, 1948, p. 67-76

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